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Olgu sunumu / Case Report

SYNCHRONOUS PRESENTATION OF BREAST CARCINOMA WITH AXILLARY LYMPHOMA; CASE REPORT.

Meme karsinomu ve aksiler lenfomanın eşzamanlı sunumu; Olgu sunumu

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ABSTRACT

Synchronous occurrence of multiple neoplastic processes (diagnosed within a six month period) is uncommon and the relationship between breast cancer with lymphoproliferative diseases is unusual as well.

We present a case of 66 years old patient with invasive ductal carcinoma of breast and chronic lymphocytic leukemia detected at sentinel lymph node.

Our patient represents a rare case demonstrating for coexistence of dual malignancies. We review the literature and discuss possible etiologies for these synchronous tumors. There are some hypotheses as human breast cancer and lymphoma may share a common etiologic agent and this patient to show that further investigation is necessary for treatment and etiology of synchronous tumours.

Key words: Breast cancer, chronic lymphocytic leukemia, multiple neoplasia, synchronous neoplasia, sentinel lymph node.

ÖZET

Multipl neoplastik süreçlerin eşzamanlı gelişimi (altı aylık zaman diliminde tanı konulmuş olması) yaygın değildir ve meme kanseri ile lenfoproliferatif hastalıklar arasındaki ilişki beklenmediktir.

Sentinel lenf nodu biyopsisinde kronik lenfositik lösemi saptadığımız, memesinde invazif duktal karsinoma olan 66 yaşındaki bir olguyu sunuyoruz. Hastamızın durumu malignensilerin birlikte göründüğü nadir bir durumdur. Sunulan olguda literatürü derledik ve bu tür senkronize tümörlerin olası etyolojilerini tartıştık. Mevcut hipotezler meme kanseri ve lenfomanın ortak etyolojik etkenleri paylaştığını göstermektedir ve bu olgu eşzaman tümörlerin etyolojisi ve tedavisi için daha ileri araştırmalar yapılması gerektiğini ortaya çıkarmıştır.

Anahtar kelimeler: Meme kanseri, kronik lenfositik lösemi, çoklu neoplazi, eşzamanlı neoplazi, sentinel lenf nodu.

INTRODUCTION

Synchronicity of malignant tumours is rare.[1] Among the pathogenic mechanisms suggested to explain the increased risk of second primary neoplasms are the mutagenic effects of radiation and chemotherapy, genetic predisposition, advanced age, depressed immunity and environmental factors. The simultaneous occurrence of multiple neoplastic processes is less common, and only a few cases have been reported in the literature.[2]

Coincident presentation of breast carcinoma and axillary lymphoma has been reported for a variety of lymphoma subtypes[3], These include, mantle cell lymphoma[4,5], follicular lymphoma[6,7], centroblastic-centrocytic lymphoma[5,7], centroblastic polymorphic lymphoma[8], Waldenstrom subtype lymphoma[9], and small lymphocytic lymphoma / chronic lymphocytic

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leukemia.[2,8,9] In a subset of these cases, collision tumors of breast and lymphoma within a single axillary lymph node have also been reported.[2,7,9,10]

The use of sentinel lymph node biopsy (SLNB) can obviate the need for elective lymph node dissection. The SLN is defined as the first lymph node to receive drainage from a primary tumor, and is the best indicator of the pathologic status of the rest of the lymph node basin.[6] We describe a rare case in which a SLN involved by chronic lymphocytic leukemia coexisted with invasive ductal carcinoma of breast.

Case

A 66-years-old woman presented with a mass in the right breast measuring 20 mm without axillary lymphadenopathy. Mammography showed a 21x18 mm irregular mass in the upper medial part of the right breast and Ultrasound demonstrated a 20x15 mm irregular mass highly suggestive of malignancy. There were no lymphadenopathies detected at mammography and ultrasound and no evidence of disease in the left breast. Tru-cut biopsies were obtained which showed invasive ductal carcinoma. Family history was not notable for breast carcinoma.

The patient underwent right breast lumpectomy and sentinel lymph node lymphadenectomy by using 500 uCi 99mTc-nanocolloid for sentinel node detection. Intraoperative frozen section analysis of sentinel node did not demonstrate metastatis. Routine histopathologic examination demonstrated that the specimen consisted of a lumpectomy and three lymph nodes. The excision specimen measured 11,5x6x6,5 cm. The mass was measuring 3 cm in largest diameter showing invasive ductal carcinoma, classified as grade 2 according to the modified Bloom-Richardson grading system with cribiform-type and comedo type ductal carcinoma in situ. The anterior and lateral margins of specimen were positive. Immunohistochemical staining was possitive for estrogen receptor (ER) (75%), progesterone receptor (PR) (30%) and was negative for cerbB2. Three axillary lymphnodes revealed as sentinel lymphnodes did not reveal any metastasis, an atypical lymphoid infiltrate and extracapsular extention were also present in one of the lymph nodes. Further examination of that lymph node showed that the architecture of it was destroyed by monotype small lymphocytes. Immunophenotypic analysis showed that, the lymphoid infiltration was positive for CD20, CD5, CD23, moderately positive for Bcl-2. The proliferation centers were prominent with Ki-67. The remaining T lymphocytes were dyed with CD3. The findings were diagnostic of chronic lymphocytic leukemia (CLL). In the light of these findings of positive margins in the lumpectomy specimen, modified radical mastectomy and a level I and II axillary lymph node dissection was performed. The histopathologic examination showed no residual tumour in the breast tissue and no metastatic lymph node (0/29), all the lymph nodes were infiltrated by small lymphocytes.

Subsequent evaluation of the patient's leukemia was as follows. On further questioning, the patient was asymptomatic at time of diagnosis and denied night sweats, fever, or weight loss. She did not describe a palpable lymph node. On physical examination, there were no lymphadenopathies detected. Blood tests at her first hospitalization revealed elevated lymphocyte count of 10,700 cells/mm³ with elevated white blood cell count of 16,100 (Normal levels between 4,100-11,200 cells/ mm³).

Examination of the bone barrow aspirate also showed marked lymphocytosis. The studies confirmed the diagnosis of CLL. The patient was referred to The Oncology department for further treatment.

DISCUSSION

Synchronous malignancies (i.e., tumours diagnosed within a 6-month period) are rare.[11] Synchronous presentation of breast carcinoma with axillary lymphoma is an exceedingly rare phenomenon; only case reports and one small series of patients has previously been documented in the literature.[1] There are some cases describing the potential of breast chemotherapy to cause grave second hematological malignancies of the T-cell lymphoid lineage.[12] As our patient did not receive previous chemotherapy or radiotherapy, the CLL was a true synchronous neoplasm, unrelated to treatment of carcinoma. Various factors can contributed to synchronous neoplasms, including advanced age of the patients, depressed celular immunity produced by the first tumour, genetic predisposition and exposure to a common inducing agent.[10] The association of CLL with other primary malignancy has been noted by several authors.[11,13] Impairment of the immun system caused by CLL could be a predisposing factor. Growth and survival of a tumour in any new organ depends on microenviromental influences (i.e., growth factors, adhesion molecules, effects of the extracellular matrix, etc.). Metastasis of carcinoma to lymphomatous lymph nodes is rare.[10] Cox et al demonstrated three cases of breast carcinoma with coincidental axillary lymphoma showing no evidence of metastatic carcinoma within the axillary nodes.[5] According to Cox et al, if it is assumed that the lymphoma or lymphoproliferative condition occurred first, then obliteration of lymphatic channels by a neoplastic lymphoid tumour could be a factor. Also, neoplastic lymphoid cells could locally reduce tissue necrosis factor or interleukin (IL) induces adhesion of breast cancer cells to the endothelial layer of axillary lymph nodes.[14] The situation, however, is undoubtedly more complex because occasionally carcinomas do metastasize to lymphomatous nodes.[9,15] In such cases, it seems likely that the lymphatic channels are at least partially patent, and that the carcinoma cells can overcome resistance offered by the pre-existing lymphoma cells through a complex interaction.[5] In our case, axillary lymph node dissection did not reveal further metastatic disease.

There are some hypotheses as human breast cancer and lymphoma may share a common etiologic agent describing mouse mammary tumour virus (MMTV)(16). Etkind et a. reported MMTV gene sequences detected in both tumour sites in two patients with synchronous lymphoma and breast cancer.[17] The possible role of viruses in the etiology is very important for preventive measures such as vaccines.

In conclusion; our patient represents a rare case demonstrating a synchronous presentation breast carcinoma and chronic lymphocytic leukemia. One of the purposes of this article is to allert clinicans and pathologists for coexistence of dual malignancies. If lymphoma was not detected in the SLN, the second malignacy would be diagnosed after chemotherapy and radiotherapy and lymploma would be attributed to these treatments. Another purpose of this article is to show that further investigation is necessary for treatment and etiology of synchronous tumours.

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